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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/803,928 | 03/19/2004 | Kazuyoshi Nagase | 11-243 | 6717 |
| 23400 | 7590 | 07/11/2005 | EXAMINER | |
| POSZ LAW GROUP, PLC 12040 SOUTH LAKES DRIVE SUITE 101 RESTON, VA 20191 | | | HE, AMY | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2858 | |

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/803,928 | NAGASE, KAZUYOSHI |
| | Examiner | Art Unit |
| | Amy He | 2858 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2 and 9-11 is/are rejected.
- 7) Claim(s) 3-8 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 March 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/19/04.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Grace (U. S. Patent No. 5, 357, 191).

Referring to claim 1, Grace discloses a disconnection detecting circuit (in Figure 3) for a sensor apparatus, comprising a control circuit (the combination of computer 49 and circuit 34-35 and 40-47) and a sensor circuit (the combination of probes such as P1 and 38, 29 and 26) including a functional circuit (26) having one or a plurality of transistors (30) for outputting a sensor signal to said control circuit upon receipt of power supply from said control circuit in a state where a plurality of connection lines and terminals (the plurality of connection lines or terminals between different networks, or between computer 49 with the associated control circuitry and either one of the probes with the associated sensing circuitry) are interposed between said control circuit and said sensor circuit, with said disconnection detecting circuit being made to detect a disconnection of at least one of said connection lines (col. 4, lines 1-10),

wherein, in a normal operation, an energizing current is supplied directly from said control circuit (the combination of computer 49 and circuit 34-35 and 40-47)

through said terminal to a collector or drain of the transistor (30) in the sensor circuit side, and

in response to the occurrence of a disconnection of said connection line (col. 4, lines 1-10), an impedance in the sensor circuit side is set to be higher than an impedance in the control circuit side (the impedance in the sensor circuit side could be higher than the impedance in the control circuit side).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace (U. S. Patent No. 5, 357, 191), in view of Woodworth (U. S. Patent No. 3, 826,977).

Referring to claims 2 and 9-11, Grace discloses the circuit as in claim 1, wherein the transistor is a bipolar transistor (30). Grace does not disclose a reverse current checking means for checking current in the transistor, or a current checking means for checking supply of a base current to the bipolar transistor, at the occurrence of the disconnection of the connection lines. Woodworth discloses a reverse current checking means constructed by a diode-connected transistor (see the diode and the transistors as shown in the Figure). A person of ordinary skill in the art would find it obvious at the

time of the invention to modify Grace to use a reverse current checking means constructed by a diode-connected transistor, as taught by Woodworth, in order to check the reverse current in the bipolar transistor at an occurrence of a disconnection, since it has been held to be within the general skill of a worker in the art to select a known tool for a known purpose on the basis of its suitability for the intended use as a matter of obvious design choice *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA).

Allowable Subject Matter

3. Claims 3-8 are objected to as being dependent upon a rejected base claim (1), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hashizume et al. (U. S. Patent No. 5,422,568) discloses a disconnection detecting circuit comprising a sensor circuit and a control circuit, wherein the sensor circuit including a transistor.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AH
July 5, 2005.

V. Nguyen
7/07/2005

VINCENT Q. NGUYEN
PRIMARY EXAMINER